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ICT IN EDUCATION IN NIGER



Map of Niger: CIA World Factbook

Overview

The Republic of Niger is mostly desert and the poorest country in the world. Subsistence agriculture is the principal economic activity of its people who are confronted with inclement seasonal weather changes that further impact negatively on their harvest volumes.

The country has an underdeveloped electric power and communications infrastructure that can hamper its drive towards the deployment of ICT in the education sector and the public at large. Another challenge is the scarce financial resources that renders the provision of basic educational infrastructure nearly intractable to government not to mention the supply of computers to schools.

It is worthy to note, however, that the Nigerien government has implemented structures and made plans that should enable accelerated development in the ICT sector if the necessary donor support is found.

Introduction

The Republic of Niger is a landlocked country in the Sahel region of West Africa. Niger is bordered by Algeria, Mali, Libya, Burkina Faso, Benin and Nigeria^I. The country is plagued by frequent droughts which adversely impact the subsistence-based economy of its large agrarian population. The major languages are French, Hausa and Djerma. Below are the country's selected population and economic statistics:

Population^{II}:	12,525,094 (July 2006 est.)
Population growth rate:	2.92% (2006 est.)
GDP in US\$ billion:	2.0
GDP^{III} per capita in US\$:	170
Human Development Index rank:	Last and poorest of 177 countries.

Uranium^{IV} contributes 31% to the country's total export earnings. Thirty-three percent of the country's ground area is cultivated by 90% of the population that live off agriculture which contributes about 40% to the GDP. Sixty-six percent of the population lives below the poverty line^V with 34% in abject poverty. Niger's population has 65% health coverage.

Education system and Structure

Niger practices a 6-year primary, 4-year junior secondary, 3-year senior secondary and a 2- to 4-year tertiary education system^{VI} with 6 years of compulsory education and a compulsory primary school enrolment age of 7. Tabulated below are the ministries responsible for education and their sectors of administration.

Ministry	Sector
Ministry for Basic Education and Literacy	Primary education and Literacy
Ministry for Secondary, Higher Education, Research and Technology	Secondary and Tertiary education

Each of the two ministries has a regional departmental headquarters located in each of the 8 regions of the country who manage issues related to the sector under their jurisdictions. The Ministry for Basic Education has 40 literacy centres and 3 directorates across the country for its literacy programs.

Government builds 1 000 classrooms in the rural areas each year under the HIPC initiative. A new teacher recruitment policy was implemented to augment the number of teachers especially in the basic education sector. Further, 35 schools have been rehabilitated for 1 198 pupils.

Education currently receives 28% of government budget allocation, 40% of which is from HIPC funds with 50% of the provision for basic education.

Enrolment disparities exist between the urban and rural populations as well as between the sexes. The ratio of girls to boys' enrolment^{vii} is 65:100 whilst that of the rural to the urban population is 45:100.

Literacy rate^{viii} for youth is 25.6%, adults 20% with males at 30% and females at 11%.

Infrastructure

Telecoms Infrastructure

Niger invested more than FCFA 25 billion (approx. US\$ 50 Million) in telecoms infrastructure^{ix} to establish digital international telephone and automatic telex connectivity with the rest of the world. The main operator, Sonitel, is 51% privatized, has 25 000 subscribers (2005) distributed over 13 switching centres in 13 localities without any fibre optic installation.

Other services enabled are: Nigerpac, a data packets transmission service; leased line services; the internet; cellular telephone services; and VOIP services by 11 operators in 6 of the big cities including Niamey. Many cyber cafes offer VOIP, internet access and basic computer training services.

Meanwhile a substantial portion of the country's network is analogue and most times unreliable except in the capital, Niamey, and some selected cities like Maradi, Koni and Gaya. There are three mobile operators and 300 000 cellular subscribers with coverage for all the big cities.

There is growing demand^x in the capital and some rural areas for quality telecoms service. However, capital investment funds from government budget sources are inadequate.

An NGO, *Telecom Sans Frontières (TSF)*^{xi}, has established a cyber cafe in Dakoro, one of the cities in Niger that caters for government agencies and private sector companies. TSF intends training the student population on the use of computers and the internet. Other interested companies may connect to the VSAT service using WiFi (wireless connectivity) to prevent unnecessary physical movement to the TSF site.

Beyond these possibilities, internet communication in other cities in Niger is at best via dial-up connections over noisy telephone lines.

Electrification

Niger produces 232 KWh of electricity from its thermal plant^{xii} and sources the rest of its energy needs from Nigeria^{xiii} but is able to provide for only 10%^{xiv} of the population in the cities.

The rural areas where 85% of the population resides have no electricity. Consequently in July 2006, the government created the *Cellule d'Electrification Rurale (CER)*^{xv}, Rural Electrification Unit, to address the problem.

A group, SOS Kandadji^{xvi}, have also initiated moves to source funding from international sources for the construction of a dam over the Niger River to produce 125 MW of electricity. The project is yet to obtain funding.

Policy Framework and Implementation

Niger's NICI plan recognizes the role of a national steering committee involving: government, private sector, the press (television and radio) and civil society. Development partners are invited as observers to committee sessions. Further is the establishment of the ICT Coordination Centre responsible for ICT application in government.

The policy reveals six main strategic components:

- Infrastructure development;
- Linking ICT to the Poverty Reduction Strategy (PSR);
- Legal and regulatory issues on ICT;
- Content development;
- Capacity building; and
- e-government.

With assistance from the ECA, Niger finalized and presented its ICT development plan to the national assembly in May 2005.

Further, the High Commission for New Technologies in Information and Communication (HCINTIC) was established to midwife the process, specifically to develop the legal, regulatory and institutional framework including the harmonization of policies with sister countries and regional organizations. The Commission which is located in the office of the Prime Minister is equally

responsible for ICT policy promotion and technology development at the national level.

Niger has established an ICT training centre in Niamey, a branch of *l'Institut Africain d'Informatique* based in Gabon, and in addition created a sectoral network comprising the press, women parliamentarians, NGOs, the youth and the universities to help accelerate the integration of the various strata of society with ICT development.

Some government departments have already been linked using fibre optic cable whilst a study on the harmonization of sub-networks of the government intranet is being conducted and the feasibility study on the interconnection of ministries and institutions of state is complete.

Other envisaged projects are the national fibre optic backbone, linkage of the telecoms system to the SAT3 submarine cable, and the request to ISPs to increase bandwidth. Government hopes to continue investment in the telecoms sector for the next five years.

Educational Policy

Niger's 10-year educational development plan (PDDE; 2003-2012) stipulates:

- Support for access and retention of girls in school through strategizing and implementing plans at local level;
- Tutorial assistance to girls;
- Improvement of schools for the handicapped, schools in nomadic zones, schools for dispersed populations and providing food for pupils;
- Teacher training including the management of multi-grade classes as rural alternative schools;
- Development of integrated schools and institutions for the deaf; and
- Implementing a strategy to cater for dispersed children and the adaptation of the school calendar to disadvantaged pupils.

Assistance to disadvantaged populations and girls has become imperative given the current situation where 2 out of 3 children are unschooled with a worse statistic for the rural area; only 32% of the students pass their basic school exams; only 16% of the students are successful in secondary schools without repeating; and private school fees are in the order of US\$ 1 000 compared to US\$ 15 for the public schools.

This worsened situation is the result of policies introduced upon the implementation of the structural adjustment programme which culminated in the

privatization of services in the university (restaurant facilities, residential accommodation and transport); replacement of qualified teachers with badly-paid contractual staff due the cessation of recruitment in the civil service; increase in school fees and such adverse measures that worsened an already bad situation.

The products of Nigerien schools^{xvii} are mostly jobless and unemployable because of a poorly designed curriculum that does not teach employable skills and government's inability to absorb them.

Government's ICT plans involve focusing on and reducing the dearth of knowledge and acute illiteracy in the population through employment of ICT. The planned ICT emphasis, it is hoped, will help create jobs. However, owing to the extreme prevailing poverty, the 10-year programme does not include any indication of ICT application in education. Furthermore, government's inability to provide an adequate number of schools and educational infrastructure makes the populace assume that it has abdicated its responsibility^{xviii} to its citizens.

Major Initiatives

ICT Law

Niger already has a draft^{xix} ICT law since January 2006 that is yet to be promulgated. The law requires the training of officers in its legal institutions, the restructuring of existing institutions and the establishment of new ones before it can be effectively applied.

Primary Education

The "basic school for food" programme and other educational policies have generated an increase in enrollment from 37.3% in the past to 50% in 2005.

Development partners, specifically the European Union,^{xx} emphasize assistance on teacher training, the integration of schools into their environments and development of bilingual training, i.e. the local language and French. In 2005, 80 public schools introduced the teaching of the local languages and French whilst the teacher training colleges instituted new teacher training methods.

Since 2005 the UNDP^{xxi} has been donating 400 refurbished computers to 40 primary schools each year. The computer laboratories enable the pupils to use computers and surf the internet. The objective is to impact 200 000 pupils each year in 40 schools. The UNDP will equally train the teachers who will train their pupils. The project aims at inciting intellectual curiosity, research and the use of computer tools generally.

Vocational and Technical Training

The European Community is assisting Niger to provide post-primary education training to school leavers. The budgetary support has enabled the country to build Community development training centres. Those centres also provide training for the unschooled and school dropouts. The government has built 25 of such facilities of which 10 are for females.

Tertiary Education

The University of Lausanne^{xxii} and the Department for Cooperation and Development of the Republic of Germany assisted the Geography Department of the Abdou Moumouni University in Niamey with 15 computers which enabled the faculty to run remunerative consultancy services to augment its budget even in dire financial circumstances confronting the university. Receipts from those services enabled the faculty to establish a second geography computer laboratory with internet connection.

The World Health Organization donated computer equipment to the Faculty of Health Sciences in the Abdou Moumouni University in Niamey to assist it to combat malnutrition^{xxiii} and conduct nutritional surveillance in 2005 – 2006.

The *Agence Universitaire de la Francophonie*^{xxiv} has also established a *Campus Numérique* (Learning Centre) in the University. The Centre is equipped with 50 computers and two servers. There are plans to increase the number of computers to 70. The learning centre enables students to apply to Universities in the Francophone world. Their applications are vetted and those successful are given scholarships that permit them to pursue degree or masters' level programs at about 15% of the original cost.

The African Virtual University (AVU)^{xxv}, a World Bank sponsored e-learning project, has adopted the *Université Abdou Moumouni* of Niamey as one of five francophone universities in its distance learning programme. The AVU Learning Centres are equipped with VSAT internet connection, Servers, 25 PCs and ancillary equipment, television and video-conferencing facilities. AVU courses are via the internet, on video cassette or by videoconference where interactive sessions with instructors in remote places are organized for students and lecturers.

The AVU structure permits the intervention of local tutors to assist students in difficulty, practical work and examination assessment at local level by local tutors in the host university. The average cost of programmes is US\$ 900. The very first

few students on the AVU programmes are Niger government scholarship holders – an indication of government support for technology driven education.

Television in Education

Télévision scolaire (education television) was introduced by the French government in Niger in the 60s. The government then installed television sets in community centres as a way to reach the larger population with the programmes. However, this was discontinued owing to criticisms that whilst the lessons enabled its audience to learn to read rapidly it did not equip them with adequate writing skills.

Radio in education

The government has envisaged a nationwide interconnected community radio project to be linked to the internet. The radio network will be used to sensitize the population and produce mainly development oriented programmes. The internet connection is to permit the stations to transmit the same programmes when necessary. The system is called RURANET^{xxvi} and is to be launched in collaboration with UNICEF, FAO and other international organizations.

Enabling, Constraining and Risk Factors

Tabulated below are the enabling, constraining and risk factors per subject of consideration.

Sectors	Enabling factors	Constraining Factors	Risk Factors
ICT Deployment	Installation of the 2MB bandwidth connection in Sonitel has made internet available in Niger. AVU and the AUF facilities have improved internet access especially for the university community.	AUF and AVU courses are within the reach of very privileged few who can afford the few hundred dollars or are lucky to obtain government scholarship.	Inability of government to extend ICT infrastructure due to financial and budgetary constraints
Non Formal Education	Political and budgetary support for NFE Community schools - 500	Insufficiency of budget funds once the HIPC initiative ends and	Financial means to continue and maintain the facilities after

	teachers trained.	necessary government budgetary support may not be available.	Completion of the HIPC programme and donor funds.
Gender Balance in Education	<p>Awards given to committed women adult learners in the NFE centres to encourage the participation of girls/women learners.</p> <p>Centres built close to the communities to encourage girls/women participation.</p> <p>Some centres created purposely for women and girls.</p>	<p>Tradition that keeps girls from being educated especially in the rural areas.</p> <p>Girls put to domestic chores.</p> <p>Discrimination against girls.</p> <p>Sexual harassment.</p>	<p>Stoppage of the sensitization programme for girls' education.</p> <p>Exhaustion of the HIPC funds.</p>
Vocational and Professional Education	Government policy to build a lot more technical/vocational schools using the HIPC budgetary support.	Government budgetary constraints	Inadequacy of the number of centres
ICT Policy implementation	Policy developed and publicised.	Slow pace of implementation due to financial constraints.	Government's inability to source vital funds from donors and partners to develop and extend telecoms infrastructure and electricity to the larger population in order to widen access to ICT.

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- ^{II} <https://www.cia.gov/cia/publications/factbook/geos/ng.html>
- ^{III} <http://www.care.org/careswork/countryprofiles/84.asp>
- ^{IV} www.world-nuclear.org/sym/2004/souley.htm
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